The following collection types are relevant for Kotlin

**List** - List is an ordered collection with access to elements by indices.   
Elements can occur more than once in a list.

**Set** - Set is a collection of unique elements which means a group of objects without repetitions.

**Map** - Map (or dictionary) is a set of key-value pairs.  
Keys are unique, and each of them maps to exactly one value

Kotlin Collection Types  
  
Kotlin provides the following types of collection:

* Collection or Immutable Collection
* Mutable Collection

**Kotlin Immutable Collection**  
Immutable Collection or simply calling a Collection interface provides read-only methods which means once a collection is created, we cannot change it because there is no method available to change the object created.  
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|  |  |  |
| --- | --- | --- |
| **Collection Types** | **Immutable Collection** | **Mutable Collection** |
|  |  |  |
| List | * listOf() * listOf<T>() | * ArrayList<T>() * arrayListOf() * mutableListOf() |
| Set | setOf() | * hashSetOf() * mutableSetOf() |
| Map | mapOf() | * HashMap * hashMapOf() * mutableMapOf() |

**List**

Kotlin list is an ordered collection of items.

How to Create a list in Kotlin. ?

fun main(args: Array<String>){  
val thelist= *listOf*("Vinay","Lakshmi","Mandira")  
val theMutableList= *mutableListOf*("N-assignment","Arohoka","Embdes","Vithamas","MindTree")  
 *println*("MutableList= $thelist")  
 *println*("IMMutableList= $theMutableList")  
}

**Looping through List**.

* iterator
* .toString()
* forLoop
* forEach

**.toString()**

fun main(){  
 val thelist = *listOf*("Vinay", "Lakshmi", "Mandira")  
 *println*("Using .toString --> ${thelist.toString()}")  
}

**iterator/while Loop**

fun main(){  
 val thelist= *listOf*("One","Two","Three","four","five","six")  
 val iterator=thelist.iterator()  
 while (iterator.hasNext())  
 *println*(iterator.next())  
}

**forLoop**

fun main(){  
 val thelist= *listOf*("One","Two","Three","four","five","six","Seven")  
 for(i in thelist.*indices*)  
 *print*(thelist[i]+",")  
}

**foreach**

fun main(){  
 val thelist= *listOf*("One","Two","Three","four","five","six","Seven","Eight","Nine")  
 thelist.*forEach* **{** *println*(**it**)**}**}

Mutable List

fun main(){  
 val thelist= *mutableListOf*("One","Two","Three","four","five","six","Seven","Eight","Nine")  
 thelist.add("ten")  
 thelist.*forEach* **{** *println*(**it**)**}**}

Immutable List

fun main(){  
 val thelist= *listOf*("One","Two","Three","four","five","six","Seven","Eight","Nine","Eleven")  
 thelist.*forEach* **{** *println*(**it**)**}**}

Points to Remember